

147 atgtcggactacgagaacgatgacgagtgctggaacgtcctggag CARD domain
M S D Y E N D D E C W N V L E
192 ggcttcgggtgacgctcacctcggtcatcgacctcagcgtc
G F R V T L T S V I D P S R I
237 acaccttacctgcgagtgcaaggtcctgaacctgatgatgag
T P Y L R Q C K V L N P D D E
282 gagcaggtgctcagcgaccccaacctggtcatccgcaaagcggaaa
E Q V L S D P N L V I R K R K
327 gtgggtgctcctggacatcctgcagcggacggccacaagggc
V G V L L D I L Q R T G H K G
372 tacgtggccttcctcgagagcctggagctctactaccgcagctg
Y V A F L E S L E L Y Y P Q L
417 tacaagaaggtcacaggcaaggagccggcccgctcttctccatg
Y K K V T G K E P A R V F S M
462 atcatcgacgcgtccggggagtcaggcctgactcagctgctgatg
I I D A S G E S G L T Q L L M
507 actgaggtcatgaagctgcagaagaaggtgcaggacctgaccgcg
T E V M K L Q K K V Q D L T A
552 ctgctgagctccaaagatgacttcatcaaggagctgcgggtgaag
L L S S K D D F I K E L R V K
597 gacagcctgctgcgcaagcaccaggagcgtgtgcagaggctcaag FILAMENT domain
D S L L R K H Q E R V Q R L K
642 gaggagtgaggccggcagccgcgagctcaagcgtgcaaggag
E E C E A G S R E L K R C K E
687 gagaactacgacctggccatgcgcctggcgacccagagtgaggag
E N Y D L A M R L A H Q S E E
732 aaggcgccgcgctcatgcggaaccgtgacctgcagctggagatt
K G A A L M R N R D L Q L E I
777 gaccagctcaagcacagcctcatgaaggccgaggacgactgcaag
D Q L K H S L M K A E D D C K
822 gtggagcgcaagcacacgctgaagctcaggcacgccatggagcag
V E R K H T L K L R H A M E Q
867 cggcccagccaggagctgctgtgggagctgcagcaggagaaggcc
R P S Q E L L W E L Q Q E K A
912 ctgctccaggcccggtgcaggagctggaggcctcgtccaggag
L L Q A R V Q E L E A S V Q E
957 gggagctggacaggagcagcccctacatccaggtactggaggag
G K L D R S S P Y I Q V L E E
1002 gactggcgccgagcgctgcgggaccaccaggagcaggccaacac
D W R Q A L R D H Q E Q A N T
1047 atcttctccctgcgcaaggacctccgccaggcgaggcccgacgc
I F S L R K D L R Q G E A R R
1092 ctccggtgcatggaggagaaggagatgttcgagctgcagtgctg
L R C M E E K E M F E L Q C L
1137 gactacgtaaggactccaagatgtacaaggaccgcatcgaggcc
A L R K D S K M Y K D R I E A
1182 atcctgctgcagatggaggaggtcgccattgagcgggaccagagc
I L L Q M E E V A I E R D Q S
1227 acacaaatggaggggctgtga 1247
T Q M E G L *

FIGURE 1

1 atggatgactacatggagacgctgaaggatgaagaggacgccttg CARD domain
M D D Y M E T L K D E E D A L
46 tgggagaatgtggaagtgaaccggcacatgctcagccgctatatac
W E N V E C N R H M L S R Y I
91 aaccctgccaaqctcacgcctacctgcgtcaqtgtaaaqgtcatt
N P A K L T P Y L R Q C K V I
136 gatgagcaggatgaagatgaagtgccttaatgccctatgctgcca
D E Q D E D E V L N A P M L P
181 tccaagatcaaccgaagcagccgctgttggacattctacatacc
S K I N R A G R L L D I L H T
226 aaggggcaaaaggggctatgtggtcttcttggagagcctagaattt
K G Q R G Y V V F L E S L E F
271 tattaccagaactgtacaaaactggtgactgggaaagagccact
Y Y P E L Y K L V T G K E P T
316 cggagattctccaccattgtggtggaggaaggccacgaggcctc
R R F S T I V V E E G H E G L
361 acgcacttctgatgaacgaggtcatcaagctgcagcagcagatg
T H F L M N E V I K L Q Q Q M ERM (ezrin) domain
406 aaqgccaaggacctgcaacgctgcgagctgctgcccaggttcggg
K A K D L Q R C E L L A R L R
451 cagctggagagatgaagaagaagcagatgacgctgacgcgctggaag
Q L E D E K K Q M T L T R V E
496 ctgctaacccttccaggagcgggtactacaagatgaaggaagagcgg
L L T F O E R Y Y K M K E E R
541 gacagctacaatgacgagctggtcaaggtgaaggagcagacaactac
D S Y N D E L V K V K D D N Y
586 aacttaagcatgctgctacgcacagctcagtgaggaagaagaacatg
N L A M R Y A Q L S E E K N M
631 gcggtcatgaggaagcggagacctccaactcgaatcgaatcagcta
A V M R S R D L Q L E I D Q L
676 aagcaccggttgaataagatggaggaaggaatgttaagctggagaga
K H R L N K M E E E C K L E R
721 aatcagctctctaaaactgaagaatgacattgaaaatcggcccaag
N Q S L K L K N D I E N R P K
766 aaggaagcaggttcttggaaactggagcgggagaatgaatgctgaag
K E Q V L E L E R E N E M L K
811 accaaaaaccagagctgcaqtccatcatccagggcgggaagcgc
T K N Q E L Q S I I Q A G K R
856 agcctgccagactcagacaaggccatcctggacatcttgaacac
S L P D S D K A I L D I L E H
901 gaccgcaaggaagccctggaggaagcaggaagctggtcaacagg
D R K E A L E D R Q E L V N R
946 atctacaacctgcaggaaggaagcccgccaggaaggaagctgcca
I Y N L Q E E A R Q A E E L R
991 gacaagtacctggaggaagaaggaaggaagctggaagctcaagtgctc
D K Y L E E K E D L E L K C S
1036 accctgggaaaggaactgtgaaatgtacaagcaccgcatgaacacg
T L G K D C E M Y K H R M N T
1081 gtcatgctgcagctggaggaaggtggagcgggagcgggaccagga
V M L Q L E E V E R E R D Q G

FIGURE 2A

1126 caggctgtggccttccaggacactgcacaaagctctcaacaca
 Q A V A F Q G H C I K A L N T
 1171 gagcctgccactagcaaggttcggaccatcggtctgtgacgcg
 E P A T S K G R T I G S V I A
 1216 ttaatgaaagggccttccactcccgagatgaaqctcagacacag
 L M K K A F H S R D E A Q T Q
 1261 tactcgcaqtgcttaatcgaaaaagacaaqtacaggaagcagatc
 Y S Q C L I E K D K Y R K Q I
 1306 cgcgagctggaggaagaaacgacgagatgaggtcagatgggtg
 R E L E E K N D E M R I E M V
 1351 cggcgaggaggcctgcacgtcaacctggagagcaagctgcggcgc
 R R E A C I V N L E S K L R R
 1396 ctctccaaggacagcaacaacctggaccagagtctgccaggaac
 L S K D S N N L D Q S L P R N
 1441 ctgccagtaaccatcatctctcaggactttggggatgccagcccc
 L P V T I I S Q D F G D A S P
 1486 aggaccaatgggtcaagaagctgacgattcttccacctcgaggag
 R T N G Q E A D D S S T S E E
 1531 tcacctgaagacagcaagtacttctgcctaccatccgccccag
 S P E D S K Y F L P Y H P P Q
 1576 cgcaggatgaacctgaaggcctccagctgcagagagccaaatcc
 R R M N L K G I Q L Q R A K S
 1621 cccatcagcctgaagcgaacatcagattttcaagccaagggcac
 P I S L K R T S D F Q A K G H
 1666 gaggaagaaggcagcagccagccctagctcctgcggatctctg
 E E E G T D A S P S S C G S L
 1711 cccatcaccaactccttcaccaagatgcccccccgagccgcagc
 P I T N S F T K M P P R S R S
 1756 agcatcatgtcaatcaccgcgagcccccggaacgactccatc
 S I M S I T A E P P G N D S I
 1801 gtcagacgtctacaaggaggacgcgccccatcgagcacagtcgaa
 V R R Y K E D A P H R S T V E
 1846 gaagacaatgacagcggcggtttgacgccttagatctggatgag
 E D N D S G G F D A L D L D E
 1891 ctggcagcaggggagactgtggctcagagtcctccaggtgtgccc
 L A A G E T V A Q S P P G V P
 1936 tgccagccccctctcttcagggtcctcccccagcctttgccagcta
 C Q P P L F Q G S P S L C Q L
 1981 aggctgccaaaccgatgaaacgaaagatgagtggtcctccttaatg
 R L P T D E T K D E W S S L M
 2026 gggaagcatcagcgctaccaagtgttaaagagagatgacagtcac
 G K H Q R Y Q V L K R D D S H
 2071 gaacgctactccttcggaccctcctccatccactcctcctcctcc
 E R Y S F G P S S I H S S S S
 2116 tcccaccaatccgagggcctggatgcctacgacctggagcaggtc
 S H Q S E G L D A Y D L E Q V
 2161 aacctcatgttcaggaaqtctctctggaagacccttccggcct PDZ domain
 N L M F R K F S L E R P F R P
 2206 tcggtcacctctgtgqggcacgtgcgqggcccaaggccctcggtg
 S V T S V G H V R G P G P S V
 2251 caqcacacgacgctgaatggcgacagcctcacctcccagctcacc
 Q H T T L N G D S L T S Q L T
 2296 ctgctggggggaacgcgcgagggagcttctgactcggtcaag
 L L G G N A R G S F V H S V K
 2341 cctggctctctgqccgagaaagcccgccctcctgagggccaccag
 P G S L A E K A G L R E G H Q
 2386 ctgctgctgctagaaggtgcacccgagggcagagggcaggtgtc
 L L L L E G C I R G E R Q S V
 2431 ccgttggacacatgcaccaaaaggaagcccactggaccatccag
 P L D T C T K E E A H W T I Q
 2476 aggtgcagcggcccgccctcacgctgcactacaaggtcaaccacgaa
 R C S G P V T L H Y K V N H E
 2521 gcccagcagaaaatccgtgggcctgcagaatatgatgtgggcagc

FIGURE 2B

A Q Q K I R G P A E Y D V G S
2566 acctccaaagcccgagctgcgcagcagcacagccctgcaagtct
T S K A R S C A A A Q P C K S
2611 ggaattccagggaagaaagtccattccggcaggggtaccggaag
G I P G K E S S F R Q G Y R K
2656 ctggtgaaggacatggaggacggcctgatcacatcgggggactcg
L V K D M E D G L I T S G D S
2701 ttctacatccggctgaacctgaacatctccagccagctggacgcc
F Y I R L N L N I S S Q L D A
2746 tgcaccatgtccctgaagtgtgacgatgttggtgcacgtccgtgac
C T M S L K C D D V V H V R D
2791 accatgtaccaggacaggcagcagtggtgtgctgcgcgggtcgac
T M Y Q D R H E W L C A R V D
2836 cctttcacagaccatgacctggatatgggcaccatacccagctac
P F T D H D L D M G T I P S Y
2881 agccgagcccgagcagctcctcctggtgaaactgcagcgcctgatg
S R A Q Q L L L V K L Q R L M
2926 caccgaggcagccgggaggaggtagacggcaccacacacccctg
H R G S R E E V D G T H H T L
2971 cgggcactccggttcgtcagcaggtccgagaacaagtataagcgg
R A L R F V S R S E N K Y K R
3016 atgaacagcaacgagcgggtccgcacatctcggggagtcggcta
M N S N E R V R I I S G S P L
3061 gggagcctggcccggtcctcgctggacgccaccaagctcttgact
G S L A R S S L D A T K L L T
3106 gagaagcaggaagagctggaccctgagagcgagctgggcaagaac
E K Q E E L D P E S E L G K N
3151 ctcagcctcatccctacagcctggtacgcgccttctactgcgag
L S L I P Y S L V R A F Y C E
3196 cgccgcccggcgtgctcttcacaccacccgtgctggccaagacg
R R R P V L F T P T V L A K T
3241 ctggtgcagaggctgctcaactcgggaggtgccatggagttcacc
L V Q R L L N S G G A M E F T
3286 atctgcaagtccagatctcgtcacaagagatgagttcctcagaagg
I C K S D I V T R D E F L R R
3331 cagaagacggagaccatcatctactcccagagagaagaaccccaac
Q K T E T I I Y S R E K N P N
3376 gcgttcgaatgcacgcgccctgccaacattgaagctgtggccgcc
A F E C I A P A N I E A V A A
3421 aagaacaagcactgcctgctggaggctgggatcggtgcacaaga
K N K H C L L E A G I G C T R
3466 gacttgatcaagtccaacatctaccccatcgctcttcatccgg
D L I K S N I Y P I V L F I R
3511 gtgtgtgagaagaacatcaagaggttcagaaagctgctgccccga
V C E K N I K R F R K L L P R
3556 cctgagacggaggaggagttcctgcgcgtgtgccggctgaaggag
P E T E E E F L R V C R L K E
3601 aaggagctggaggccctgcgcgtgctgtacgccacggtggaacct
K E L E A L P C L Y A T V E P
3646 gacatgtggggcagcgtagaggagctgctccgcgttgtaaggac
D M W G S V E E L L R V V K D
3691 aagatcggcgaggagcagcgcaagaccatctgggtggacaggac
K I G E E Q R K T I W V D E D
3736 cagctgtga 3744
Q L *

FIGURE 2C

1 atgggggaactgtgccgcagggactccgcactcacggcactggac
M G E L C R R D S A L T A L D
46 gaggagacactgtgggagatgatggagagccaccgccacaggatc
E E T L W E M M E S H R H R I CARD domain

91 gtacgctgcattctgccccagccgcctcacccccctacctgcgccag
V R C I C P S R L T P Y L R Q
136 gccaaaggtgctgtgccagctggacgagggagggaggtgctgcacagc
A K V L C Q L D E E E V L H S
181 ccccgqctcaccaacagcgccatgcgggcccgggcacttgctggat
P R L T N S A M R A G H L L D
226 ttgctgaagactcgaggggaagaacggggccatcgcccttcctggag
L L K T R G K N G A I A F L E
271 agcctgaagtccacaaccctgacgtctacaccctggtcaccggg
S L K F H N P D V Y T L V T G
316 ctgcagcctgatgttgacttcagtaactttagcggtgagagctcc
L Q P D V D F S N F S G E S S
361 gactttgacgggtttggcaggcacttctaggaacctcaggctcctg
D F D G L A G T S R N L R L L
406 gtaaccccagnn 417
V T P X

FIGURE 3

GI "10436238"

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1 msdyenddec wnvlegfrvt ltsvidpsr1 tpylrqckvl npddeeqvls dpnlvirkkrk
61 vgvlldilqr tghkgyvafl eslelyypql ykkvtgkepa rvfsmiidas gesgltqlm
121 tevmklqkkv qdltallssk ddfikelrvk dsllrkhqer vqrlkeecae gsrelkrcke
181 enydlamrla hqseekgaal mrnrdlglei dqlkhsmlka eddckverkh tiklrhameq
241 rpsqellwel qgekallqar vqealeasvqe gklrdrsspyi qvleedwrqa lrdhgeqant
301 ifslrkdlrq gearrlrcme ekemfelqcl alrkdsmyk drieaillqm eevaierdqs
361 tqmegl

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GI "10436237"

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1 atcatcagga agtgcacagg cgtccggcgt gctcctccct ccctgcagcc ccgggagca
61 tctcccagag gctccggcgc ccaggctcct ggtgtgtctg cagtgcaggt ggctcctgga
121 agaccctcag cctgcctgct gaggccatgt cggactacga gaacgatgac gagtgctgga
181 acgtcctgga gggcttccgg gtgacgtca cctcggatcat cgaccctca cgcacacac
241 cttacctgag gacgtgcaag gtccgaacc ctgatgatga ggagcaggtg ctcagcgacc
301 ccaacctggt catccgcaaa cggaaagtgg gtgtgtcctt ggacatcctg cagcggaccg
361 gccacaagg ctacgtggcc ttctctgaga gcttgagct ctactaccgg cagctgtaca
421 agaaggtcac aggcaaggag ccggcccgcg tcttctccat gatcatcgac gcgtccgggg
481 agtcaggcct gactcagctg ctgatgactg aggtcatgaa gctgcagaag aaggtgcagg
541 acctgaccgc gctgtgagc tccaaagatg acttcatcaa ggagctgcgg gtgaaggaca
601 gctgtctgag caagcaccag gacgtgtgac agaggctcaa ggagagtgac gaggccggca
661 gccgcgagct caagcgtgac aaggaggaga actacgacct ggccatgcgc ctggcgccac
721 agagtgagga gaaggcgcc gcgctcatgc ggaaccgtga cctgcagctg gagattgacc
781 agctcaagca cagcctcatg aaggccgagg acgactgcaa ggtggagcgc aagcacacgc
841 tgaagctcag gcacgccatg gacgagcggc ccagccagga gctgctgtgg gagctgcagc
901 aggagaaggc cctgtctcag gcccggtgac aggagctgga ggccctccgc caggagggga
961 agctggacag gagcagcccc tacatccagg tactggagga ggactggcgg caggcgctgc
1021 gggaccacca ggagcaggcc aacaccatct tctccctgag caaggacctc cgccaggggc
1081 agggccgacg cctccgggtg atggaggaga aggagatgtt cgagctgcag tgccctggac
1141 tacgtaagga ctccaagatg tacaaggacc gcatcgaggc catcctgctg cagatggagg
1201 aggtcgccat tgagcgggac cagagcacac aaatggaggg gctgtgacca gcctccgcgc
1261 ccagcggtct gacgtcctcc ggagcctctg cttggagttg ggcgccgggg ccgaggggcc
1321 agggcaagct tggggccctc actgagggtc ggccctgtgc tgtcccgtca ggccatagcc
1381 acgcgggagg agctgcacgc acagcacgcc cggggcctgc aggagaagga cgcgctgcgc
1441 aagcaggtgc gggagctggg cgagaaggcg gatgagctgc agctgcaggt gttccagtgt
1501 gaggcgagc tactggcgtg ggagggcagg ctcaggcggc agcagctgga gacgtcgtc
1561 ctgagctccg acctggaaga tggctcacc aggaggtccc aggagctctc actccccag
1621 gacctggagg acaccagct ctcagacaaa ggctgccttg ccggcggggg gagcccgaaa
1681 cagcccttg cagctctgca ccaggagcag gttttgcgga acccccatga cgcaggcctg
1741 agcagcgggg agcgcgccga gaaggagcgg cggcgccctc aagagagttt tgagaactac
1801 cgcaggaagc ggcgccctcag gaagatgcag aaaggatggc ggagggggga ggaggaccgg
1861 gagaacacca cgggcagcga caacaccgac actgagggtc cctagccgca gcagacttcc
1921 ccgagcgcgc gctgacttg cctggaacga ggaatctggt gccctgaaag gccagccgg
1981 actgcccggc attggggccg tttgttaagc ggactcatt ttgaggaggc catgcccgtg
2041 ctcaccaccc ccatgcacac gccatctgtg taacttcagg atctgttctg tttcaccatg
2101 taacacacaa tacatgcatg cattgtatta gtgttagaaa acacagctgc gtaaataaac
2161 agcacgggtg acccgc

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FIGURE 4

GI"9094656"

GAGAGGCTCCGCGGCCCCAGGCTCCTGGTGTGTCTGCAGTGCAGGTGGCTCCTGGAAGACC
CTCAGCCTGCCTGCTGAGGCCATGTTTACTACGAGAACGATGACGAGTGCTGGAGCGTC
CTGGAGGGCTTCCGGGTGACGCTCACCTCGGTTCATCGACCCCTCACGCATCACACCTTAC
CTGCGGCAGTGCAAGGTCTGAACCCCGATGATGAGGAGCAGGTGCTCAGCGACCCCAAC
CTGGTCATCCGCAAACGGAAAGTGGGTGTGCTCCTGGACAT

GI"7132200"

GGGACAGCCTGCTCCGCAAGCACCAAGAGCGGGTGCAGAAGATGAGGGAGGAGAGGGACA
GTCTAAGCAAGGAGCTGCGGAAGTGCAAGGATGAGAACTACAACCTGGCAATGAGCTATG
CCAGACAGAGCGAGGAGAAGAGCAGTGCCCTCATGAAGAACAGGGACCTGCTCCTAGAGA
TTGATAGCTTGAAGCATAGCCTCATGAAGGTGAGGACGACTGCAAACCTAGAGCGTAAGC
ACTCGATGAAACTGAAGCATGCCATAGAACAACGTCCGAGCCATGAAGTGATGTGGGAGA
TCCAGCAGGAGAAGGAGCTGCTTTTGGCCAAGAATCAGGAGCTGGAGAACACTCTTCAGG
TTGCCAGGGAACAGAATTTGGAGACGAGTCTCTCCCATGAGACTGTGCAGAATGACTGCA
GCCAGGTGCTGGAGCGCCAGGACCTGCTGAACACCCTGTACCACCTTCGCAAGGAGCTGC
GCCAAGCCGAGGTGCTTCGAGACAAGTTCGAGGAGTGCAGCTCAGCCCACGAGGAGCTGT
CCGAGAAGGAGCGCAGGAGGATGAAGGACTGCTTTGAGCGTTACCGCAGGAAGCGCGCCC
TGCGCAGAGCGCCCCGCGGGCCCCGCCCGAGGCCGACTGGGAGCCGAGCACGGGCAGC
GACAACACGGACACCGAGGGCAGCTAGGGGCCGCGCGAGCTTTCGAGTTTGAGCTGGAT
CCGTCAATAAACAG

GI"5884878"

TGAACACCCTGTACCACCTTCGCAAGGAGCTGCGCCAAGCCGAGGTGCTCCGAGACAAGT
ATGCAGAGGAAAAAGAAATACTTGAAGTACAGTGCACATCTCTGAGGAAGGACTCCCAGA
TGTATAAAAAACGGATGGAAGCTGTCTTAGAGCAGATGGAGGAAGTGGCTTCGGAAAGAG
ACCAGGCACTGCTGACCAGAGAACAGTTCTACCCACAGTACTCCAAGAACCTTGTGAGA
GGGACACTTATCGGAAGCAGATTTCGGGAGCTGGGGGAGCGATGCGATGAGCTGCAGCTGC
AGCTCTTCCAAAAGGAGGGTCACTACTGGCTACTGAAGCCAAGCTGAAAAGACTGCAAC
TGGAGCTGCCTGCACTGACTTCTGACCTGGATGACACTCCTCCAGAGATCCCAGGTCTTA
CTCTCATGGTCATCTAGACGAAGATCGCACCTGACTAAAAAAGACGCTGTAAAGGAAAAC
CAGCAATCAGCATGCAAGAAACATCTGACGCAGATCACCCTTCGAGGATGCACTAACCA
CAAGACTTCGAGAAGACGGAGAGATAAGGATGCTTGAGCGTACGAGTCGGCCGATCCGCG
CCCCCCTCCGCGCTCCTTCCGTGGCTCGT

FIGURE 5

CARD11X ESTs

GI"6926669"

CACGAGGGAAATGTACAAGCACCGCATGAACACGGTCATGCTGCACCTGGAGGAGGTGGA
GCGGGAGCGGGACCAGGCCTTCCACTCCCGAGATGAAGCTCAGACACAGTACTCGCAGTG
CTTAATCGAAAAGGACAAGTACAGGAAGCAGATCCGCGAGCTGGAGGAGAAGAACGACGA
GATGAGGATCGAGATGGTGCGGCGGGAGGCCTGCATCGTCAACCTGGAGAGCAAGCTGCG
GCGCCTCTCCAAGGACAGCAACAACCTGGACCAGAGTCTGCCCAGGAACCTGCCAGTAAC
CATCATCTCTCAGGACTTTGGGGATGCCAGC

GI"6143407"

TTTTTTTTTTTTTTTTTCTCTCCTGCCTCCTCTGGCCTTCGGACTCCTGCCCCGCGCCGCCG
CAGCCCCCTCCCGGCCCTGCAGCCCCCTGGGCGGGCGGGCGCCCCCTCGGAGGACGGCTCCGG
GCCCCGGGGGACGGAGGGCCTGGTGCCTGGAGGAAGCCGGAGGCCTGCGTGGAGGAGGC
GCCCCGCGCAGCTGGCTGGCGGAGCATGAGCGCCCCAGATCCCAAGCACTGCAAGTCCAG
ATGCAACGGGAGCCTGGCTCAAGGGACGACAAGATCCAGCCGGAAAGTGTAGAAGTCACA
CCCCAATGGCGGGATAGCAGCCCCCTGTGTGTGAGCACCCCTCCATGCCAGGAGGAGGGCC
AGAGATGGATGACTACATGGAGACCCTGAAGGATGAAGAGGACCCCTTGTGGGACAATGT
GGAGTGTAAACGGCACATGCTCAACCGCTATATCAACCCTGCCAAGCTCACGCCCTAC

GI"2785620"

GCAGCCCCCTCCCGGCCCTGCAGCCCCCTGGCGTGCGGGCGCCATCGGAGGACGGCTCCGGG
CCCCGGGGGACGGAGGGCCTGGTGCCTGGAGGAAGCCGGACGCTGCGTGGAGGAGGCGC
CCCCGGTCTGGTCTGGCGGACGATGAGCGCCCCAGATCCCAAGCACTGCAAGTCCAGATG
CAACGGGAGCCTGGCTCAAGGGACGACAAGATCCAGCCGGAAAGTGTAGAAGTCACACCC
CAATGGCGGGATAGCAGCCCCCTGTGTGTGATCACCCCTCCATGCCAGGAGGAGGGCCAGA
GATGGATGACTACATGGAGACGCTGAATGATGAAGAGGACGCCTTGTGGGAGAATGTGGA
GTGTAACCGGCACATGCTCAGCCGCTATATCAACCC

GI"1838222"

AAAAGGAGGAGGGCCAGAGATGGATGACTACATGGAGACGCTGAAGGATGAAGAGGACGC
CTTGTGGGTGAATGTGGAGTGTAAACCGGCACATGCTCAGCCGGGTCTCACGAATTCGCT
GAGTTCTACGAATTCGCTGAGGTCTCACGAATTCGCTGA

GI"6927709"

CACGACGACGGACGCCAGCCCTAGCTCCTGCGGATCTCTGCCCATCACCAACTCCTTCAC
CAAGATGCAGCCCCCGGAGCCGAGCAGCATCATGTCAATCACCGCCGAGCCCCCGGG
AAACGACTCCATCGTCAGACGCTACAAGGAGGACGCGCCCCATCGCAGCACAGTCGAAGA
AGACAATGACAGCGGCGGGTTTGACGCCTTAGATCTGGATGATGACAGTCACGAACGCTA
CTCCTTCGGACCCCTCCTCCATCCACTCCTCCTCCTCCCACCAATCCGAGGGCCTGGA
TGCCTACGACCTGGAGCAGGTCAACCTCATGTTTCAGGAAGTTCTCTCTGGAAAGACCCTT
CCGGCCTTCGGTCACCTCTGTGGGGCACGTTCCGGGGCCCAAGGCCCTCGGTGCAGCAC

FIGURE 6A

GI"9142863"

GI"1761194"

GI"8151878"

FIGURE 6B

GI"2007639"

AAGAGACTTGATCAAGTCCAACATCTACCCCATCGTGCTCTNTCATCCGGGTGTGTGAGA
AGAACATCAAGAGGTTGAGAAAGCNGCTGCCCCGGCCTGAGACGGAGGNGNAGTTCCTGC
GCGTGTGCCGGCTGAAGGNGAAGGAGCTGGAGGCCCTGCCGTGCCTGTACGCGACGGTGG
AACCTGACATGTGGGGCAGCGTAGAGGAGCTGCTCCGCGTTNTATAAGGACAAGATCGGT
GAGNAGCAGCGCAAGACCATCTNGGTAGACGAGGACCAGCTTT

GI"8042493"

GTGTACTGCCTTCTGAGGAACTCATCTCTGTGACGATATCTGACTTGCAGATGGTGA
CCATGGCACCTCCCGAGTTGAGCAGCCTCTGCACCAGCGTCTTGGCCAGCACGGTGGGTG
TGAAGAGCACGGGCCGCGCGCTCGCAGTAGAAGGCGCGTACCAGGCTGTAGGGGATGA
GGCTGAGGTTCTTGGCCAGCTCGCTCT

GI"2079290"

GACTTGATCAAGTCCAACATCTACCCCATCGTGCTCTTCATCCGGGTGTGTGAGAAGAAC
ATCAAGAGGTTGAGAAAGCTGCTGCCCCGGCCTGAGACTGGAGGAGGAGTTCCTGCGCGT
GTGCCGGCTGAAGGAGAAGGAGCTGGAGGCCCTGCGATGCCTGTACGCCACGGTGAACC
TGACATGTGGGG

GI"7044777"

GAAATAATAATACATTTTAATGCAAGAGAAATCATAGCCTGGTACACACCCCTTCCCCGA
TCTGTCCTGCCTGGGGATGTGTTTATGGTGAGTGTGTCCCCAGGACTGGTAGTCACCTGG
CTGTCCGGGTCCCCGCCCTACTGGCGGCAGCATGCCTGTCCCCAGCATTACATTCAACTG
CTGCTCTGGCTCTCGAGAGGCCGGCTGGCCTCNGGCCTTCCGGCTTGGCGTTCTTTGCTC
CCCTGTCTCCCTGCTAAGGCCAGCAGGGCCAACTGCTAGGCCAGGTCAGCCAGGGCTGG
GGGAATGGGCTGTACCCTGCTCCTCCCCAGGCACGACTGTCCCCCGGGGCTCCATCACC
GGGTGGGGCGGAGCGTCTGCTGGGGCAGCTCTGTGGGCCACAGGATCCCCCGCACCCAC
TGCATCTCTCTGCCCATGGTGCCTGCCTCATAGGATGCCCCGCGCCACAGAGTCTATATG
TCCAGGGCGCCCGCCTCACAGCTGGTCTCTCGTCCACCCAGATGGTCTTGCGCTGCTCCTC
GCCGATCTTGCTCTTGACATCGCGGAGCAGCTCCTTTACGCTGCCCCACATGTCAGGTGC
CCCCG

FIGURE 6C

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GI"10316320"

TCATGCCCAGCTCCGTCCCACCCAGCAGCCCGCAGAGAAAGGAGGCAGCTGGCACCACAC
TGGGCTTTGGAGACACTGCGGGGACTGTGGACCCACCCTGCTGCACGGAGCTCCTGCAA
AAGCAAACCTGAGAACCTTGGGTCTCTCCAGCGCCCAGCCATGGGGGAACTGTCCCGCAG
GGACTCCGCACTCACGGCACTGGACGAGGAGACACTGTGGGAGATGATGGAGAGCCACCG
CCACAGGATCGTACGCTGCATCTGCCCCAGACGACATTAACCCCTATACTGTGACGCACA
GCGCCAGAGGCTGGCTGCTGACCATGGATGGACCGAGGAGGGAGGTTGCTGCACCAGCGC
CCACGAGACATCAACAACAGACGCACACTGCGGGGCGGGGCACATAGCGTGGCCTCGCGC
TAGAAAAGACATCAGAGGAGAAAGAAGCGGGGGCCCACTCGCACTCACCGTGAGTAGACGC
CATGCACAGTACCACCAAACCCATGAGCGCTACTACAACCCATGGGTCAACAGGGCATGA
CAGCCTGGATGCATAGACATAACAAGTAACTTCTACTAGCCAGGTCCTCATGCGAAGACC
ATCCCAAGCCTGACCCGACATGCCCTGGACATGGGGCCCACTACGCGCAGACCATGCAGC
GAGAGACGCATGACACCAGGCAACAACGCGGGCCACGAACGCGAGCGTTGCCTGCATCGA
CGGGCACGGTTGGCCACAGACACGGAATTGCAGCGGAGCCACACGTGGCAGCCCCTGAGG
CCGACGACACCCGGTGCACCGAAGGGGGCCATGGCAACCACGACCTGGCAGGCTTGACAC
ACCAAGCGCCATACCCACGCGCGTGAAAGGGTACAGAGGCACCAACTACCCAGTGCAAGCG
CAGTTCTTGCAAGGCGATGCCAAGGGAACGGCACGACATGACGACACCGCAGTACTCTGT
GAGGAAACCATCTTAGCAAGATGACAGCCTTGACAGGAAACAACGACACGAAGTGCCTGT
CTCGCAACGCATGACAGAAGACCTGTGCGCATATAAAGTAAATGTGATACTAATAGAAAGC
AAGAAGGTTGACACTGAAAGACACACATATGAGTATAACTCGAGTATGCAACGTGAACAT
G

FIGURE 7